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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/654,567	08/29/2003	Steven J. Eck	01-05	5069

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EXAMINER
CHARLES, MARCUS

ART UNIT	PAPER NUMBER
3682	

DATE MAILED: 09/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/654,567	ECK, STEVEN J.	
	Examiner	Art Unit	
	Marcus Charles	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-8,13-17,20-28,30 and 31* is/are pending in the application.

4a) Of the above claim(s) *24-26* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-8,13-17,20-23,27,28,30 and 31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 August 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is responsive to the amendment/RCE filed 09-06-2006 respectively, which has been entered. Claims 1, 3-8, 13-17, 20-28, 30-31 are currently pending.

Election/Restrictions

1. The text of those sections relating to the withdrawal of claims 24-26 are not included in this action can be found in a prior Office action.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the bearing member as in claims 1 and 23, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

It should be noted that if is item 16 is a bearing member, then the outer bearing race is clearly not shown. There is not distinction in the drawing between the bearing member and the race so as to allow the pulley to rotate freely. It appears that what is being disclosed as a bearing member is a race that is frictionally engaged with the insert. In addition in claims 20-21 and 30, the claims recite the central hub includes a locating means and in claims 22 and 30, the locating mean is a profile or a detent. However, the drawing does not show the hub (14) having any détente or profile.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure

number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 20-21 are objected to because of the following informalities: Claim 20 is dependent from canceled claim 19. For the purpose of this office action, the claim will be treated as if it is dependent from claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 30 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 30, "said tubular shell insert" and "tubular shell insert" lack antecedent basis. In claim 5, the claim recites the polymeric material is polyphthalamide. However polyphithalmide is not included in the limitations of claim 3.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCutchan, Jr. (4,468,210) in view of Avery (1,560,524). McCutchan, Jr. discloses a pulley having a body (80), and a bearing carrier insert (86) forming a central hub which has inner and outer circumferential surfaces, and housing a bearing member (85), and the outer race of the bearing is circumferentially adjacent the inner circumferential surface of the bearing, wherein the bearing member inherently allows the pulley to freely rotate in either direction. McCutchan, Jr. also discloses the coated section between the insert and the polymeric body to assist in the bonding of the polymeric body to the pulley. McCutchan, Jr. fails to disclose the coating comprises zinc that is fixedly adhere to the insert. Avery discloses a pulley (see fig. 1) comprising a polymeric body (28), a metal part and a zinc alloy coating (20) between the polymeric body and the metal part such that the polymeric body is molded to the zinc alloy coating in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of McCutchan, Jr. so that the coating is zinc in view of Avery in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body.

In claim 22, McCutchan, Jr. discloses the knurled section (figs. 13-14, item 30).

8. Claims 1-5, 8, 13-14,15-17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer (4,366,609) in view of Avery (1,560,524) and McCutchan, Jr. Speer discloses an idler pulley comprising a moldable polymeric body (24), with a belt receiving peripheral shaped surface (20); a tubular insert (12) manufactured from a rigid metal, the insert forming a central hub along the perpendicular axis of the pulley body, the hub having an inner circumferential surface and an outer circumferential surface, the surface of the insert is coated by being roughened or by sandblasting. Speer does not disclose the coated surface is coated with brass or zinc. Avery discloses a pulley (see fig. 1) comprising a polymeric body (28) an metal part and an zinc alloy coating (20) between the polymeric body and the metal part such that the polymeric body is molded to the zinc alloy coating in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Speer so that the coating is zinc in view of Avery in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. In addition, Spear also fails to disclose a bearing member having an outer race fitted within the central hub. McCutchan, Jr. discloses the claimed invention above in paragraph 7 above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the hub of Speer so as to accommodate the bearing member of McCutchan, Jr. in order to allow the pulley to rotate freely and reducing friction.

In claim 3, Speer discloses the pulley body is manufactured from a moldable polymeric material, which is phenolic resin.

In claims 4-5, Speer discloses the polymeric can be a polyamide (col.2, lines 34-55). Applicant has failed to establish the polyphithalmide solves any stated problems or is for any specific purpose (unexpected results) and it appears that the polyamide would perform equally in the operation of the pulley.

In claims 13-14, Avery discloses the metal coating (18). The metal is coated before being formed in an aluminum sleeve (46).

In claim 15-17, Speers discloses the claimed invention (see col. 2, lines 56-67).

In claim 22, note Speers clearly discloses the locking portion (26) and holes in the insert created by the punch section of the locking portion.

9. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view Avery and McCutchan, Jr. as applied to claim 1 above, and further in view of JP (02-202928). Speers fails to disclose the type of polyamide is nylon. It is well known in the art that nylon is an organic base in polyamide that produces high resistance to temperature and good resistant to abrasion. JP (02-202928) discloses that polyamides such as nylon 6, and nylon 12 are suitable because of their high melting point and highly crystalline structure, Therefore, it would have been obvious to one of ordinary skill in the art to further modify the body of Speer so as to use a polyamide consisting of the group including nylon 6 or nylon 12 in view of JP (02-202928) in order to produce high temperature resistance and good resistant to abrasion.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view Avery and McCutchan, Jr. as applied to claim 1 and further in view of FR (1,595,346). Speer discloses the use of high-density polyethylene (col. 2, lines 51-55), the use of fibrous glass (col. 2, lines 54-55), which is glass fiber but fails disclose an adhesion promoter is selected from a group consisting of Talc or mica. FR (1,595,346) discloses that it is known in the art to use Talc or mica as reinforcing adhesion promoters in moldable plastics to increase strength and produce good abrasion. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to use talc or mica as an adhesion promoter in the moldable plastic of Speer as disclosed by FR (1,595,346) so as to increase strength and produce good abrasion.

11. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCutchan, Jr. in view Avery as applied to claim 1 above, and further in view of Hoffmann et al. (4,046,432). McCutchan, Jr. discloses the claimed invention except for the hub including means for locating the bearing member during assembly. Hoffmann et al. discloses a bearing member (23) fitted within a central hub, wherein the hub includes a location means (37/47/57), which is a detente and is allowed to lock the rotational movement of the bearing, retaining relative axial movement and to facilitate proper alignment between the bearing in the hub. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the pulley of McCutchan, Jr. so as to include a location means in view of Hoffmann et al. in order to lock the rotational movement of the bearing, retaining axial movement and to facilitate proper alignment of the bearing in the hub.

12. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Avery, Hoffmann et al. and McCutchan, Jr. and Arai (5,797,819). Speer discloses the claimed invention as in paragraph 8 above, but fails to disclose the zinc coating. Avery discloses a pulley (see fig. 1) comprising a polymeric body (28) an metal part and an zinc alloy coating (20) between the polymeric body and the metal part such that the polymeric body is molded to the zinc alloy coating in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Speer so that the coating is zinc in view of Avery in order to achieve great friction co-action and reduce rust between the rubber material and the metallic body. In addition, Speer does not disclose one or more bearing members locating means and a bearing member fitted in the hub. Hoffmann discloses the bearing member locating means as in paragraph 11 above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the pulley of Speer so as to include a location means in view of Hoffmann et al. in order to lock the rotational movement of a bearing, retaining axial movement and to facilitate proper alignment of the bearing in the hub. In addition, Speer fails to disclose the bearing member. McCutchan, Jr. discloses the bearing member fitting in the hub as in paragraph 5 above. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to fit a bearing member in the hub of Speer as disclose in order to reduce friction. Furthermore, Speer fails to disclose the body containing silica. Arai discloses a pulley body containing silica. It is well known in the art that the inclusion

of silica increases strength and wear resistance in order to increase strength without compromising the size and weight. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to include silica to the body of the device of Speer in view o Arai in order to increase strength without compromising the size and weight.

In claim 28, Speer discloses the claimed invention.

In claim 30, McCutchan, Avery and Hoffmann et al., Jr. discloses the bearing member as in paragraphs 8 and 11 above.

13. Claim 27 as understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Avery, Hoffmann and McCutchan, Jr. and Arai (5,797,819) as applied to claim 23 above, and further in view of JP (02-202928). Speers fails to disclose the type of polyamide is nylon. It is well now in the art that nylon is an organic base in polyamide that produces high resistance to temperature and good resistant to abrasion. JP (02-202928) discloses that polyamides such as nylon 6, and nylon 12 are suitable because of their high melting point and highly crystalline structure, Therefore, it would have been obvious to one of ordinary skill in the art to further modify the body of Speer so as to use a polyamide consisting of the group including nylon 6 or nylon 12 in view of JP (02-202928) in order to produce high temperature resistance, good resistant to abrasion.

14. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Speer in view of Avery, Hoffmann and McCutchan, Jr. and Arai (5,797,819). as applied to claim 23 above, and further in view of FR (1,595,346). Speer discloses the use of high-density

polyethylene; the use of fibrous glass, which is glass fiber (see paragraph 8 above) but fails disclose that one of the modifier, filler, and reinforcing agent and adhesion promoter is of a group consisting of Talc or mica. FR (1,595,346) discloses that it is known in the art to use Talc or mica as reinforcing filler in moldable plastics so as to increase strength and produce good abrasion. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to use talc or mica as a reinforcing agent in the moldable plastic of Speer as disclosed by FR (1,595,346) so as to increase strength and produce good abrasion.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Marcus Charles
Primary Examiner
Art Unit 3682
September 14, 2006